Responsiveness Summary—Water Quality Assessment
January 15 – March 15, 2004

GENERAL COMMENTS

Ecology received 267 sets of comments which resulted in changes based on new information and corrections. New data has also been added that was received from the public comment period. Ecology assessed 33 sets of new data (25 sets from the public and several sets from Ecology). The responsiveness summary for specific waterbodies can also be found on the website and allows the reviewer to sort by either waterbody listing identification, by the person who commented, or by Water Resource Inventory Area (WRIA).

Besides changes based on comments received, Ecology staff continued to clean up errors, such as location information, found in the database of information. Many of the errors go back to the 1996 and 1998 303(d) lists. Changes were also made to the Assessment based on Ecology staff information and expertise (for example natural condition calls were made by Environmental Assessment Program staff that are reflected in the revised Assessment). *These changes are not included in the Responsiveness Summary unless it was related to a public comment.*

The department may have inadvertently overlooked general comments on specific waterbodies that are not addressed as specific changes to the categories. If you do not find a response to your comment, please contact Susan Braley at (360) 407-6414 or by email at 303d@ecy.wa.gov. We will continue to refine the final responsiveness summary that will go to EPA when the final Water Quality Assessment and candidate 303(d) list is submitted for review and approval.

The department of Ecology received general comments not associated with a specific waterbody. Many of the comments were associated with Water Quality Policy 1-11: Assessment of Water Quality for the 303(d) List." Policy 1-11 was finalized in September 2002 and used as a basis for listing waterbodies in the various categories, including Category 5, the 303(d) List.

General comments are grouped into the following sections:

- Decisions based on Policy 1-11
- Categories
- Pollutant Parameters & Medium
- Other

Decisions based on Policy 1-11

1. Ecology should use credible data to make 303(d) listing decisions.

Response: Policy 1-11 includes information and policies for using good science that meets minimum quality assurance requirements. Section 7 of the Policy, starting on page 17, describes quality assurance requirements for data submitted to Ecology. This section of the policy was followed when determining whether proper quality assurance was met.

2. Disagree with the Policy 1-11 section on listing contaminated sediments for the 2002/2004 list, especially given the action that EPA took in the 1998 list to add sediment listings.

Response: For purposes of listing contaminated sediments on Category 5, Ecology believes it is appropriate to list in accordance with Policy 1-11, which bases listings on the Contaminated Sediment Site List requirements. Sediment listings were definitely a contentious issue between EPA and Ecology during the 1998 listing process. In order to avoid that same problem this listing cycle, the Water Quality Program and Toxics Cleanup Program met with EPA in 2002 to discuss sediment listings. Those discussions resulted in an understanding of what EPA would accept for sediment listings, which is outlined in Policy 1-11. EPA further stated during those discussions that the reason for the additional sediment listings in 1998 was not because of a determination that listings must be based on a sediment quality standard, but rather because EPA felt the 1998 listing policy was not explicit enough.

3. Ecology should honor the 1997 agreement it signed with tribes for cooperative management of the Section 303(d) program.

Response: Policy 1-11 describes cooperation with tribes in section 4 (starting on page 4) and cites the 1997 Agreement. Ecology has followed the 1997 agreement and will continue to do so by contacting and consulting with tribes at appropriate times. Prior to the public review of the first draft of the Assessment, Ecology met with interested tribes and has used tribal information and expertise where it has been given. Ecology contacted tribes prior to the second public review, and will do so again prior to submitting the final Assessment to EPA for review and approval. Individual tribes have worked with Ecology during this Assessment process by providing data, commenting on listings, and confirming waters on reservation lands so that they are not inadvertently included in the state's assessment of waters.

4. Ecology should state the basis (good cause) for de-listing a waterbody from the 303(d) list onto one of the other categories. One possible approach is to code each rationale and place the codes in either the remarks box or the listing basis box.

Response: Ecology has included information in the remarks part of each listing decision for those waterbody segments that are moving off the 303(d) list to another category. These remarks explain why the waterbody segment is no longer considered impaired for the purposes of 303(d) listing.

5. Ecology should provide rationale that is consistent with its Listing Policy and EPA Guidance in the use of data that is ten years or older for the assessment of an impaired water segment. As part of the rationale, Ecology should provide all data, old and new, to show a clear picture of when and why the water segment was put into category 5 and then removed to another category.

Response: Ecology followed Policy 1-11 in section 8 (data requirements) which states that whenever possible, the assessment will be based on data collected in the previous ten years. The precise date will be ten years before the beginning of the "call for data" period. Ecology will publicize this date. If data are available that are less than ten years old, that meet the other requirements of this policy, and that allow for a determination of impairment or nonimpairment with regard to a given segment and parameter, then data for that segment and parameter that are more than ten years old will not be used. If no newer data that meet these criteria are available, or if too little newer data is available to reach even the minimum number of samples to potentially support a listing, then data more than ten years old will continue to be used. Older data must meet all current data requirements, and will be compared against the current policy to make the assessment decision.

6. Ecology used terms like 'historical data" and "historic record" in some of the listing basis records. Since the methodology refers directly to age of data, Ecology should be consistent and state the age of all data and/or define the terms historical data and historic record.

Response: We agree that listing the actual age of the data would be most accurate. Ecology will make an effort to make these changes as we find them.

7. The proposed binomial distribution approach might result in under-reporting impaired waters, especially in relation to small sample sizes. Ecology should better explain and justify this approach

Response: The goal of the binomial approach, as well as the straight 10% approach it replaces, is to define persistent pollution that is expected to impair beneficial uses, rather than basing listing on a single sample or on a very short period that violates the water quality standards. The 1998 policy put waterbodies on the 303(d) list when 10% of the samples exceeded the water quality standards. In the 2002/2004 policy, the binomial distribution instead tests the hypothesis that the actual conditions in the waterbody are such that at least 10% of the water would show an exceedance of the standard. This slightly raises the number of exceedances required for a 303(d) listing. It also increases the degree of certainty that there is a persistent pollution problem in the waterbody before listing.

The most significant effect from this change occurs with a small sample size. In this case, only a few more exceedances are required (in fact, with *very* small sample sizes, only one additional exceedance is required), but these few more exceedances produce a much higher *percentage* of exceedances and thus much provide greater confidence that the measurements truly reflect a water quality problem, as opposed to sampling error or random fluctuations. Ecology believes that, when there are fewer data points available, it is appropriate to require a relatively stronger showing of a problem, without raising the bar for listing to an excessive level.

Categories

1. Suggest creating a Category 1a to list previously impaired waters that are now meeting the standards they were initially failing to achieve.

Response: Ecology is reluctant to add further subcategories given the number of categories that we now have and the lack of a description in Policy 1-11. This may be something to consider for the next listing cycle. In the meantime, one can find this information using the simple query tool, by querying by Category 1 and "Yes" on the 96 or 98 list (indicating the water had previously been on the 303(d) list because of impairment).

2. The Moses Lake listings for total phosphorus resulted in several comments that Moses Lake would be more appropriately listed in Category 2, as well as comments that it should remain in Category 5 as an impaired water. Comments included questions on the credibility of the data analyzed. No new data was submitted during the comment period.

Response: Staff in the Water Quality Program closely reviewed the comments and the data which was used as a basis for the proposed listings. Staff also reviewed data to reconfirm that quality assurance was met on the samples represented in the assessment. Upon review, it was recognized that the actual sampling locations of the data were not accurately reflected in the draft 2002/2004 database. While the data appeared to be in one grid located in the middle of the lake, the samples from the initial assessment were actually taken from four different sampling locations. Based on this recognition, the data was reassessed based on the four sample locations, using data that meets quality assurance requirements, and application of Policy 1-11. Results indicate four new listings for total phosphorus in Moses Lake, one listing is on Category 5 and 3 listings are on Category 2.

3. Ecology needs to define the waters that have no data (Category 3).

Response: Ecology doe not plan to have an actual list of category 3 waters, since they would number well over 100,000. The best description can be viewed on the Water Quality Assessment Map tool, by noting anywhere there is a waterbody that does not show up in one of the category colors. When Ecology submits it's final Assessment to EPA, it will include a general description of where Category 3 waters are showing up, which can assist in future monitoring priorities.

4. It appears there are some waterbodies listed in the 4a "TMDL Approved" Category that do not yet have an approved TMDL for the listed pollutant. These waters should either remain in Category 5 (303(d) list) until a TMDL is developed and approved, or are appropriately re-categorized. Likewise, waters that should be on Category 4A are not showing up in that category. Inclusion of these waterbodies on category 4A is recommended in order to maintain an accurate record of waters that are covered by TMDLs in Washington.

Response: Ecology agrees, and conducted a careful review of waters where TMDLs have been done and what waters are covered, as well as waters where Category 4A was not yet appropriate. As a result, some waters moved back to Category 5 and some waters moved to Category 4A. .

5. The Water Quality Assessment needs to include a determination of whether or not the TMDL for the waterbody in Category 4A has been successful.

Response: Policy 1-11 dictates that if Ecology determines that a TMDL is unsuccessful due to either implementation problems or lack of progress on water quality improvements, then the

waterbody will be returned to the 303(d) list. When EPA approves a TMDL, it is done with the assumption that the implementation measures included in it will be successful in bringing about improvements to water quality. It should be kept in mind that the success of some TMDLs will take several years, depending on the type of implementation needed. Category 4A will be reviewed by regional office field staff in future listing cycles to determine if the TMDL is being successfully implemented, and if not it will be moved back to Category 5.

6. Category 4B listings need to be further reviewed before the Assessment is finalized in order to ensure that there are legal and financial guarantees that the plan will be implemented and that it addresses the contaminants that initially triggered the listing.

Response: Ecology is only accepting a limited number of pollution control plans for pollutant parameters in water for Category 4B, and those plans must meet the listing criteria outlined in Policy 1-11. Submittals must fill out a checklist that listing criteria is met, and EPA will also have to approve this new category. If EPA approves the Category 4B listings, the associated documents will be posted on Ecology's website.

7. Category 4B listings for contaminated sediments should only be allowed where there is a signed record of decisions that the work will be done and financed.

Category 4B listings for sediments were reviewed by Toxics Cleanup Program staff to confirm that legally enforceable mechanisms [i.e., MTCA Cleanup Action Plan (CAP), CERCLA Record of Decision (ROD), or RCRA Corrective Measures (CM)] had been signed to ensure source control, cleanup, and monitoring are performed at a given site. As a result several proposed Category 4B listings were moved back to Category 5.

8. For Category 4B, the final Assessment needs to include links to a more thorough description—or checklist—illustrating the results of Ecology's review that the control plan meets the criteria for Category 4B

Response: Ecology agrees with this request and will provide it when the final Assessment is submitted to EPA.

9. Ecology should accept that Washington Forest Practices rules constitute "other pollution control requirement(s)" as the term is used in 40 CFR 130.7(b)(1), and are a "Pollution Control Plan" as this term is used in the Category 4b description in WQP Policy 1-11. Waterbody/pollutant combinations proposed for Category 5 listing which are impaired due to non-point source inputs from forested lands regulated under the Washington Forest Practices Act should be reassigned to Category 4b.

Response: Ecology believes it is premature to list all forested lands in Category 4B for this listing cycle. The state forest practices rules were designed and adopted, in part, to meet the requirements of the Clean Water Act and the state water quality standards. The rules, consistent with the Forests & Fish Report, contain the array of best management practices believed to be most effective in protecting and improving water quality and habitat for threatened and endangered species while maintaining a viable forest products industry. Because the rules are so

detailed and complete, they essentially accomplish "early implementation" of the same best management practices likely to be used if a TMDL had been produced. As such, they provide a pathway to achieving compliance with the state water quality standards and the Clean Water Act.

While the forest practices rules are not primarily water quality rules, Ecology has a special role in their adoption and implementation, since many of the rules directly affect water quality. The Forest Practices Board adopts the forest practices rules, which are primarily implemented by the Department of Natural Resources. However, for those sections of the rules pertaining to water quality protection, the Forest Practices Board must reach agreement with Ecology. Ecology also has authority to independently enforce the "water quality" sections of the rules. In addition, compliance and monitoring programs for forested lands are being developed by the Dept. of Natural Resources, in collaboration with WDFW, Ecology and other stakeholders.

Therefore, in those watersheds affected only by forest practices, listings for waters impaired by sediment, turbidity, or temperature caused by forest practices on state and private forest lands will generally be lower priority and will be addressed after July 1, 2009. Exceptions may be made if requested by the landowners. Listings caused by forest practices in mixed use watersheds will be addressed according to the schedule above. TMDLs prepared in mixed use watersheds will specify that the implementation mechanism for achieving load allocations for forest practices will be compliance with the forest practices rules.

10. Category 4C listings (impaired by a non-pollutant) should move to Category 5 since they show impairment.

Response: Policy 1-11 is based on the updated *Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act, TMDL -01-03* (Regas-- July 21, 2003). Category 4C originates from this EPA guidance, which recommends that States add a new category to their integrated assessment reports to address waters when an impairment is not caused by a pollutant. Some examples of non-pollutants that cause impairment, and thus cause pollution, are:

- Physical habitat alterations, including:
    - o Stream channelization
    - o Loss of spawning gravels
    - o Reduced pool/riffle ratios
    - o Loss of large woody debris
- Physical barriers to fish migration
- Loss of habitat due to invasive exotic species
- Flow alterations, including low flows and flashier systems
- Impaired biologic communities, when the impairment is not linked or suspected to be linked to a pollutant.

11. Several comments were received on Category 4C listings for habitat and fish passage barriers. Upon further review, Ecology found that the 4C listings for habitat in question were based on the limiting Factors Analysis Reports done for the Salmon Recovery Act. The 4C listings for fish passage barriers in question came from the Washington Department of Fish

& Wildlife (WDFW) SHHEAR database. Comments included whether proper quality assurance was used, the accuracy of the listing locations, and apparent errors in the data.

Response: After reviewing the information further, Ecology found that the new Category 4C (impaired by a nonpollutant) used data from two sources that did not apply the same level of quality assurance required by the Water Quality Program Policy 1-11. One set of sources were the Limiting Factors Analysis (LFA) reports developed for the Salmon Recovery Act, and the other set of data came from the SHHEAR database that houses a variety of information on the Washington Department of Fish & Wildlife (WDFW) site, including fish blockages. After receiving several comments noting that the information on several listings were inaccurate, we checked with both sources and found that the level of quality assurance used to develop the LFA reports and input data into the SHHEAR database are not at the same level required for the Water Quality Assessment (see Policy 1-11 at page 17).. Both the Limiting Factors Analysis reports and SHHEAR database contain valuable information relative to their program goals, which Ecology will reference directly when it submits the final Water Quality Assessment results (also called the Integrated Report) to EPA.

12. Exotic species that are now listed in Category 4C should be moved to Category 5 because they are a biological pollutant.

Response: Ecology used Policy 1-11 as a basis for listing in Category 4C, which includes a description of listing for Category 4C based on "loss of habitat due to invasive exotic species." Ecology believe that invasive exotic species are a habitat impairment and would not be cleaned up through TMDL load allocations or loading capacities. The control and prevention of invasive exotic species are more appropriately dealt with by agencies that have control of ballast water, shipping, and other avenues for introducing them into the environment. As with other Category 4C listings, Ecology will include descriptions of other agency programs responsible for dealing with these habitat-related concerns when it submits it's final water quality assessment to EPA.

13. The Category 5 list should be used to list all waters that are impaired, whether they need a TMDL or not. Ecology's 303(d) list should include those from Category 4C and should define the agency responsible for fixing each non-pollutant impairment.

Response: Ecology plans to submit a list of Category 4C waters in accordance with Policy 1-11 and consistent with EPA guidance on the integrated report. When Ecology submits the final Water Quality Assessment to EPA, we will include information on other agency programs designed to address the types of listings found in Category 4C.

14. Ecology should list sites that are impaired by pollution to Category 5 (for example #21697 and 21695). Ecology should also solicit data from other sources for habitat impairments.

Response: At this time Ecology has listed habitat impairments in Category 4C. If there is associated information from a pollutant that can be cited, Ecology would consider that data for a Category 5 listing. Regarding solicitation of data, Ecology makes a reasonable effort to contact entities that it is aware of that may have data to submit. However, ultimately it is the

responsibility of the data submitter to get the information to Ecology and provide documentation that adequate quality assurance procedures were used. We will continue to try to improve the solicitation of data in future listing processes.

15. A concern with the listing policy is that one standards violation appears to be sufficient to list a waterbody on the category 5 list, with no way for it to be removed unless there is a TMDL or some other DOE approved plan. However, if subsequent years' data shows that the condition has improved and water quality standards are being met, then the policy should allow for the waterbody to be moved to, or even initially placed in, at least a category 2.

Response: A listing on Category 5 would not typically occur with on standards violation. Ecology reviewed waterbody listings based on Policy 1-11 and has corrected errors in listing where they were found.

Pollutant Parameters & Medium

1. Temperature listings on the 303(d) list should not be based on data alone but should include an assessment of the natural condition of the water and whether associated sources are contributing more then the allowable amount for human actions above natural background. If data alone is used, the listing should go on Category 2, waters of concern, until more information is gathered to confirm status.

Response: Ecology does not have the capacity to be able to do the type of study suggested for a 303(d) listing, and therefore has listed waters based on data alone. We believe it is important to reflect that the water isn't meeting the criteria, and recognize that some of it may be a factor of natural conditions. This is further determined when a TMDL study is conducted.

2. Several comments were received on sediment listings that did not appear correct or accurately reflecting the contaminated site area.

Response: After confirming numerous errors and inaccuracies in trying to merge the SEDQUAL information into the water quality database, it was determined that sediment listings would be most accurately reflected using the SEDQUAL database information directly. Therefore, listings for the Water Quality Assessment categories for sediment have been listed separately from the water column listings (sediment listings no longer show up in the water quality database of information). Because the SEDQUAL system has its own GIS map interface, it is referenced as a map tool for determining the actual locations of contaminated sediment listings.

3. It is not clear which category of designated uses and criteria is relevant for fecal coliform, which makes it difficult to evaluate whether or not the criteria are being exceeded. The water designated uses and criteria should be stated in the good cause statement to make it clear why the number of fecal coliform per 100ml is not over the criteria for each individual waterbody.

Response: The uses are determined by the waterbody class (AA,A, B, or C).

4. It appears that Ecology is removing data from their assessment of a water segment based on the methodology used for dissolved oxygen. EPA does not agree in all cases with Ecology's Policy that states "Older data must meet all current data requirements, and will be compared against the current policy to make the assessment decision." We encourage Ecology to maintain DO listings until new data is gathered consistent with the new list policy or other reasons are provided that indicate the water segment is not impaired.

Response: During the assessment of data it was determined that WQ Policy 1-11 was overly restrictive for the number of years of data excursions needed to list for D.O. impairments . Based on a review of monitoring studies for DO statewide, it was determined that multiple (3 or more) excursions for at least two years of monitoring should be used as an alternative indicator that a waterbody continues to be impaired. Waterbody segments that have less than two years of data were placed in Category 2 as a priority for monitoring so that adequate information can be obtained to determine if the waterbody is impaired.

Other

16. It was not clear that the comment period in January 2004 included a call for new data.

Response: Ecology believes that information provided on the public review made it clear that new data was being accepted. In the meeting notice provided to the public it was stated that "during this review, Ecology will also accept new data that were not submitted during the 2002 call for data." It was also stated clearly during presentations in the public workshops. Finally, there were separate webpages devoted to submitting new data.

17. A comment opportunity should be provided on any proposed 303(d) or 305(b) listings which originate from the submittal of "new" information under this public notice.

Response: Ecology agrees and is now conducting the second review of the Water Quatly Assessment based on new data submittals.

18. Ecology's 2004 Water Quality Assessment should not be driven by a workload analysis but by consideration of data regarding impairment of the states' waters.

Response: Ecology did not use a workload analysis to determine 303(d) listings and associated TMDL work. Policy 1-11 includes assessment criteria designed to better judge the condition of each water and whether it should be listed as impaired. The criteria for the Section 303(d) list were developed to identify only those waters for which there is good documentation of impairment, thus requiring the preparation of water cleanup plans, or TMDLs. It does not make public sense, given finite resources, to be conducting TMDLs on waters that are not impaired.

We believe the goal of section 303(d) was to identify those waters where traditional methods of controlling pollution (for example permitting, watershed efforts or nonpoint source programs)

were shown not to be working and thus the water had become impaired. The 303(d) list and resulting TMDL program were never intended to be the only pollution control program a state could rely on to protect its waters. Indeed, it is only a subset of a broader water quality program intended not only to cleanup pollution that has already occurred, but also to prevent pollution where possible. We believe that Category 2 offers even better opportunities to prevent further pollution from pushing the water over the edge to being polluted, and we intend to devote some future efforts to Category 2 waters.

4. In many reports Ecology describes the data as being "unpublished data." What is the significance of being unpublished data with regard to the data being used in the Assessment?

Response: Data from published studies and unpublished data are used equally in the assessment of waters. The term "unpublished data" simply means that it did not come from a published study. For example, data submitted to Ecology from county databases that continually collect data would be considered unpublished data. However, all data, whether published or not, must meet the same quality assurance requirements to be considered for use in the Water Quality Assessment.